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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,095	12/21/2000	Benyahia Nasli-Bakir	BAKIR 5121	6681

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KOCH, GEORGE R

ART UNIT	PAPER NUMBER
1734	4

DATE MAILED: 05/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/741,095	NASLI-BAKIR ET AL.
	Examiner	Art Unit
	George R. Koch III	1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "the amount of at least one component of the glue" in line 7. There is insufficient antecedent basis for this limitation in the claim. It is suggested applicant reword the phrase to read "an amount of at least one component of the glue".

4. Claim 1 recites the limitation "the waiting time" in line 8. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 1 recites the limitation "the point of glue application" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 2 recites the limitation "the amount of one of said adhesive components" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 2 recites the limitation "the ratio" in line 3. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 4 recites the limitation "the amount" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

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9. Claim 8 recites the limitation "the speed of movements" in line 2. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 9 recites the limitation "the rate of application" in line 2. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 uses the phrase "the ratio hardener:glue" which should be written out for clarity to read "the ratio of hardener to glue".

12. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Claim 15 recites the limitation "the feeder", "the control sequence", and "the glue applicator" in lines 1-3. There is insufficient antecedent basis for this limitation in the claim. It appears the error derives from depending the claim from claim 12, and that the applicant intended to depend claim 15 from claim 14. Further support for this results from the fact that claim 12 is a method claim, and claim 15 is an apparatus claim.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

15. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Williams (US Patent 4,806,183).

Williams discloses an apparatus for the controlled application of glue to elements to be assembled to a composite structure comprising element feeders (drive rollers 36a, 36b, and 36c), a glue applicator (item 42), and a control unit (items 30, 32 and 34), said control unit being programmable (see column 4, line 60), such that it adjusts the speed of drive rollers and the adhesive applicator rolls 38a, 38b, and 38c which inherently adjusts the amount of glue applied.

16. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Detlefsen (US Patent 4,961,795).

Detlefsen discloses a method of manufacturing composite products, wherein a plurality of elements are assembled by gluing them together under pressure, comprising the steps of:

- 1) providing a number of elements to be assembled (col. 10, line 13-21)
- 2) applying glue to at least one surface of each elements (col. 10, 32-40)
- 3) assembling the elements to the desired structure (col. 10, line 41-42)
- 4) subjecting the assembled elements to pressure in a press (col. 10, line 43-45)

5) controlling the amount of at least one component of the glue applied at a specific point of glue application on an element, to be a function of the waiting time it takes before the point of glue application is subjected to the pressure in the press (see especially column 10, lines 46 which disclose modifying the resin to reduce the cure time.)

As to claim 2, Detlefsen discloses that the glue or binder is a multicomponent resin that uses an accelerator, i.e., hardener, to adjust the waiting times (see especially column 10, lines 62-68).

As to claim 3, Detlefsen discloses that adding or increasing the ratio of accelerator to glue decreases the waiting time.

17. Claims 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujii (US Patent 5,665,197).

As to claim 17, Fujii discloses an element feeder (item 111), a glue applicator (item 112) and a control unit (item 125), and that the control unit controls the feed rate of the system (see column 11, lines 1-50), thus controlling the glue sequence and the glue amount.

Similarly, as to claim 14, Fujii discloses a stacking unit (item 118) and presses (item 197).

As to claims 15 (if taken to be dependent on claim 14) and 16, Fujii controls the rate of glue application by controlling the speed of the elements through the overall system, including the feeder.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

20. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cone et al (US Patent 3,895,984), Gibson et al (US Patent 5,948,188) and Detlefsen et al (4,961,795).

Cone discloses an apparatus for the manufacture of composite products, comprising an element feeder (item 120, 122, 124), glue applicator (item 70) and a press (item 144). Cone also discloses a control unit for controlling the dispensing of adhesive. The control unit is capable of being adjusted, i.e., programmed, to provide an optimal applied glue amount by adjusting the air injected into the glue. Cone discloses that the elements are stacked between the glue applicator and the press, but does not disclose the details of the stacking unit.

Gibson discloses a stacking unit that receives previously glued elements, stacks them, and transfers the stacked elements into a press (Figures 1 and 2). Gibson discloses that such a stacking unit improves the alignment of the elements (see column 2, lines 29-34). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the stacking substructure of Gibson in the overall apparatus of Cone order to ensure proper alignment and increased production efficiency.

As to claim 16, Cone is capable of adjusting the glue amount by adjusting the air quantity injected into the glue, which adjusts the rate of glue application to the elements.

21. Claim 15 (if taken to be dependent on claim 14) is rejected under 35 U.S.C. 103(a) as being unpatentable over Cone and Gibson as applied to claim 14 above, and further in view of Williams (US Patent 4,806,183).

Cone and Gibson as applied to claim 14 do not disclose that the control sequence control the speed of the movement of the feeder and thus the elements through the glue applicator.

Williams discloses a control unit (items 30, 32 and 34), said control unit being programmable (see column 4, line 60), such that it adjusts the speed of drive rollers and the adhesive applicator rolls 38a, 38b, and 38c which inherently adjusts the amount of glue applied. Such a system is capable of utilizing either discrete or continuous elements. One in the art would appreciate that utilizing a speed control system allows for quicker and finer adjustment of the glue application process by avoiding the need for

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minute changes in the glue dispensing system which are vulnerable to irregularities due to clogging and setting of the glue. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a speed control system as in Williams for adjusting the glue application in the overall apparatus of Cone and Gibson in order to ensure efficient and error free glue quantity application.

22. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Detlefsen as applied to claims 1-3 above, and further in view of the admitted prior art.

Detlefsen in claims 1-3 disclose that it is known to adjust the waiting time the glue from element to element such that the innermost, or last element, has a shorter waiting time. Detlefsen does not disclose that the glue is a two-component glue.

The admitted prior art discloses that it is known that the waiting time of glue can be adjusted by changing the glue quantity (see specification, page 1, lines 15-17, which state that the waiting time is dependent on glue quantity) for either one or two component glues. One in the art would appreciate that utilizing modified quantities of glue with different waiting times as suggested by the admitted prior art with the suggestion of Detlefsen to used different waiting times from element to element would allow for all the elements to be bonded at the same time and under the same pressure and temperature.

Similarly, as to claims 5 and 6, Detlefsen discloses that it is known to adjust the waiting times from element to element, and using the concept of changing glue quantity to change the waiting time as suggested in the admitted prior art, this would lead to

constant glue on an element, but differences from element to element such that the first element, receives the a smaller amount of glue.

As to claim 7, the examiner takes judicial notice that applying the glue in a varied manner is well known and conventional, especially when the elements are later subjected to a pressing operation which can spread the glue out under pressure before full setting occurs. One in the art would appreciate that using a varied manner of applying the glue would result in less overall glue being used, and would reduce the cost of production. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a varied manner of applying glue in order to reduce the production cost of producing the laminated final product.

23. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Detlefsen and the admitted prior art as applied to claims 4-6 above, and further in view of Fujii (US Patent 5,665,197).

As to claims 8-9, Detlefsen does not disclose controlling the amount of glue by controlling the speed of movement of the elements.

Fujii discloses that the control unit controls the feed rate of the system (see column 11, lines 1-50), thus controlling the glue sequence and the glue amount. Thus, the amount of glue applied is controlled by controlling the rate of application of glue onto the surface of the elements by controlling the speed of movement of the elements. One in the art would appreciate that utilizing a speed control system allows for quicker and finer adjustment of the glue application process by avoiding the need for minute

changes in the glue dispensing system which are vulnerable to irregularities due to clogging and setting of the glue. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a speed control system as in Fujii for adjusting the glue application in the overall of Detlefsen and the admitted prior art in order to ensure efficient and error free glue quantity application.

As to claim 10, Fujii discloses that the apparatus is capable of varying the speed of movement from one element to another. Detlefsen and the admitted prior art combine make obvious that adjusting the glue from element to element would reduce waiting times and glue overuse. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have varied the speed of movement from element to element in order to adjust the waiting times and improve production efficiency.

As to claim 11, the examiner takes judicial notice that adjusting the speed of movement such that the glue is applied in a varied manner is well known and conventional, especially when the elements are later subjected to a pressing operation which can spread the glue out under pressure before full setting occurs. One in the art would appreciate that using a varied manner of applying the glue would result in less overall glue being used, and would reduce the cost of production. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a varied manner of applying glue in order to reduce the production cost of producing the laminated final product.

As to claims 12 and 13, Fujii moves continuously, and is capable of moving stepwise.

As to claim 15, if taken to be dependent on claim 12, Fujii discloses control sequence is adapted to control the speed of movement of the feeder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (703) 305-3435 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



George R. Koch III
May 20, 2002



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600